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Uniform Peanut Performance Tests 1992

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ABSTRACT

Coffelt, Terry A., ed. 1994. Uniform Peanut Performance Tests 1992. U.S. Department of Agriculture, Agricultural Research Service, ARS-129. 23 pp.

This publication provides the results of cooperative research among the U.S. Department of Agriculture and certain state universities in the 1992 Uniform Peanut Performance Tests. These tests evaluate the adaptability of advance peanut breeding lines in the major peanut-producing states: Alabama, Florida, Georgia, North Carolina, Oklahoma, Texas, and Virginia. Included are summaries of yields and market grades from the peanut performance tests and also summaries on planting, harvesting, soil type, soil analyses, mineral amendments, rainfall, irrigation, and pesticides.

Keywords: *Arachis hypogaea* L., groundnut, yield, market grade, fatty acids, iodine value

Mention of trade names or commercial products in this publication is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the U.S. Department of Agriculture over others not mentioned.

Listing of yield performance in this publication is solely for the purpose of providing specific information and does not constitute a recommendation of a cultivar by the U.S. Department of Agriculture or by a cooperating state experiment station. Recommendations of cultivars for specific geographic adaptation and cultural management are made in some states by the Cooperative Extension Service.

While supplies last, single copies of this publication may be obtained at no cost from Dr. Terry A. Coffelt, USDA-ARS, U.S. Water Conservation Laboratory, 4331 East Broadway Road, Phoenix AZ 85040-8832.

Copies of this publication may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

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This publication presents cooperative research among the U.S. Department of Agriculture and the state universities located throughout the principal peanut-producing areas of the United States. We are indebted to the contributors, who supplied seed and conducted the tests, collected the performance data, read the manuscript, and gave permission for publication. We are grateful to Ruth Waldo of the U.S. Department of Agriculture, Agricultural Research Service, for her skillful assistance in organizing the tabular data and typing the manuscript.

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Uniform Peanut Performance Tests 1992

Terry A. Coffelt, Editor, in cooperation with State Agricultural Experiment Stations in Alabama, Florida, Georgia, North Carolina, Oklahoma, Texas, and Virginia

To evaluate potential new peanut cultivars in the major peanut-producing areas in the United States, the Uniform Peanut Performance Test (UPPT) was established through an informal agreement among collaborating scientists (table 1) and coordinated by USDA's Agricultural Research Service. The UPPT serves as a valuable breeding tool for measuring the adaptability of experimental lines compared to that of check cultivars over a wide range of growing conditions. The results provide the cooperators as well as peanut growers with information on the performance of existing and potential cultivars in Alabama, Florida, Georgia, North Carolina, Oklahoma, Texas, and Virginia.

Each year since 1972, the UPPT has been conducted by experienced personnel using sound experimental designs. Each cooperator has the option of selecting plot size, seeding rate, cultural practices, and harvesting practices that are commonly used in peanut-breeding investigations at his or her participating station. Specific cultural practices are summarized by test location.

After preliminary evaluation for at least 2 years in local tests, breeders may propose peanut lines for these regional trials. New entries should equal the local check cultivar of a similar market type in most respects and should be superior to it in one or more characteristics. Cooperators may also include additional entries in the UPPT at the test location under their supervision. A new entry is accepted for a maximum of 3 years unless continuance or discontinuance is requested by a breeder or cooperator.

MATERIALS AND METHODS

The 1992 entry list for the UPPT's (local checks not included) is shown in table 2.

Because of continued restrictions in some states on shipping and receiving seed due to the presence of peanut stripe virus, participants in Stephenville, TX, were able to test entries only after seed increase in the greenhouse. Cooperators in Headland, AL, are again participating in the UPPT. Workers at the other locations were able to

participate in a national test despite the onset of peanut stripe virus.

No Spanish- or Valencia-type entries were submitted for testing in 1992, so a national Spanish- or Valencia-type test was not conducted. However, data are reported for 10 Spanish- and Valencia-type cultivars for one location (Tifton, GA). One Virginia-type entry (VA 910212), the NC 7 check, five Runner-type entries (GA T-2842, GA T-2741, UF 79308-3, UF 85112, and F 1011), and the Florunner check were tested at nine locations (Suffolk, VA; Lewiston, NC; Tifton, GA; Gainesville and Marianna, FL; Headland, AL; College Station and Stephenville, TX; and Fort Cobb, OK). Three of these breeding lines were released as cultivars in 1993 (VA 910212 as VA 93B, GA T-2741 as Georgia Browne, and UF 79308-3 as Andru 93). Some entries were not tested at Stephenville, TX, due to the lack of seed that could be guaranteed to be free of stripe virus.

Yields are expressed in pounds per acre. Mean separations were based on the Waller-Duncan multiple range test. Values within the same column followed by the same letter are not significantly different at the 5% probability level.

Grade quality factors were determined according to Federal-state inspection service standards. See page 2 for definition of all data terms. Minimum SMK (sound mature kernel) screen sizes are 15/64 by 3/4 inch for Spanish and Valencia types, 15/64 by 1 inch for Virginia types, and 16/64 by 3/4 inch for Runner types. The agronomic and cultural practices for 1992 varied with location (tables 3-5). The diversity among locations for these variables limits the comparison of entries to individual tests.

RESULTS

Yield and grade results for Virginia-Runner-type peanuts from nine locations are presented in tables 6-14. Yield and grade results from one location for Spanish-Valencia-type peanuts are presented in table 15. In addition to grade-quality factors, cooperator D.A. Knauff provided data on fatty-acid composition for entries grown at Gainesville, FL, which are summarized in tables 16 and 17. Mean yields by location and production area are presented in table 18.

Coffelt is research geneticist, U.S. Department of Agriculture, Agricultural Research Service, U.S. Water Conservation Laboratory, 4331 East Broadway Road, Phoenix, AZ 85040-8832. A list of previous reports for 1973-91 is available on request from the author.

DEFINITION OF DATA TERMS

The following definitions of data terms are used with tables 6–15:

DK	— Damaged kernels
g/100 Seed	— Weight in grams per 100 sound mature seeds
OK	— Other kernel
% DK	— Percentage of DK's that ride the minimum screen size for SMK's and defective splits
% ELK	— Percentage of extra-large kernels that ride a screen 21.5/64 by 1 inch
% Fancy	— Percentage of in-shell peanuts that ride the 34/64-inch spacing set on the presizer
% Meat	— Percentage of all kernels in the shelling sample, including SMK's, SS's, OK's, and DK's
% OK	— Percentage of OK's that pass through the minimum screen size for SMK's
% TSMK	— Percentage of total sound mature kernels equal to the percent summation of SMK's and SS's
SMK	— Sound mature kernel
SS	— Sound split

Table 1. Cooperating agencies and personnel for Uniform Peanut Performance Tests in 1992

Location code	Location	Cooperator
10	USDA-ARS Tidewater Agricultural Experiment Station Suffolk, VA 23437	T.A. Coffelt
20	Department of Crop Science North Carolina State University Raleigh, NC 27650	T.G. Isleib
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80	Agronomy Department Oklahoma State University Stillwater, OK 74078	J.S. Kirby
90	Alabama Crop Improvement Association, Inc. P.O. Box 357 Headland, AL 36345-0357	J.P. Bostick

Table 2. Cultivars and experimental lines, market type, and originating breeder(s) for Uniform Peanut Performance Tests in 1992

Entry	Type	Originating breeder(s)
NC 7	Va*	J.C. Wynne, R.W. Mozingo
Florunner	Ru†	A.J. Norden, W.A. Carver, R.W. Lipscomb
GA T-2741‡	Ru	W.D. Branch
GA T-2842‡	Ru	W.D. Branch
UF 1011‡	Ru	D.A. Knauft, D.W. Gorbet
UF 79308-3‡	Ru	D.W. Gorbet, D.A. Knauft
UF 85112‡	Ru	D.W. Gorbet, D.A. Knauft
VA 910212‡	Va	T.A. Coffelt, R.W. Mozingo

* Va = Virginia market type.

† Ru = Runner market type.

‡ Experimental line, unreleased at time of testing

Table 3. Summary of planting, harvesting, and soil type from test locations participating in Uniform Peanut Performance Tests In 1992

Location code	Type	Date planted	Date dug	Repli-cations	Seed rate (seed/ft)	Harvest row spacing (inch)	Plot size (ft ²)	Soil type*
10	VA-RU	5-21	10-7	4	2.7	36	120	Suffolk fsl
20	VA-RU	5-11	10-8	4	1.2	36	144	Norfolk sl
30	VA-RU	4-24	8-31, 9-9, 9-21, 10-6	6	5.0	32+40	120	Tifton ls
40	VA-RU	5-18	9-29	4	3.8	36	120	
50	VA-RU	6-1	10-9, 10-16, 10-30	4	4.0	36	120	Dothan ls
60	VA-RU	5-7	10-2	6	4.7	36	90	Padina sl
70	VA-RU	5-14	11-4	6	4.0	36	90	Windthorst fsl
80	VA-RU	5-13	10-13	6	5.0	36	96	Cobb fsl
90	VA-RU	4-30	9-4, 9-15, 9-22	4	6.0	36	120	Dothan ls

* fsl = fine sandy loam, sl = sandy loam, and ls = loamy sand.

Table 4. Summary of soil analyses and mineral amendments from test locations participating in Uniform Peanut Performance Tests in 1992

Location code	pH	Soil analyses				Ferti- lizer (lb/acre)	Gypsum (lb/ acre)	Lime (lb/ acre)	Boron (lb/ acre)
		P ₂ O ₅ (lb/ acre)	K ₂ O (lb/ acre)	Ca (lb/ acre)	Mg (lb/ acre)				
10	6.1	26	73	452	43	0	800	0	0.5
20	5.7	53	44	64	12.4	0	900	1,000	0.5
30	6.0	74	66	352	23	500 (3-9-18)	1,200	0	0.5
40	6 —*	—	—	—	—	165 (0-0-60)	700	0	1.0
50	5.9	64	148	666	85	400 (0-10-20)	1,000	2,000	0.5
60	—	—	—	—	—	300 (5-12-21)	1,050	0	0
70	7.3	6	266	1,668	338	300 (13-13-13)	750	0	0
80	—	—	—	—	—	100 (18-46-0)	0	0	0
90	6.0	61	227	840	158	300 (13-13-13)	500	2,000	0.5

* Data not available

Table 5. Summary of rainfall, irrigation, and pesticides from test locations participating in Uniform Peanut Performance Tests in 1992

Location code	Rain- fall * (inch)	Irri- gation (inch)	Pesticide		
			Herbicide	Fungicide	Other
10	27.05	0.00	Vernam, Balan, Lasso, Dual	Bravo, Rovral, Vapam	Lorsban, Asanna, Orthene
20	36.10	0.00	Vernam, Prowl, Dual	Bravo, Vapam, Terraclor	Temik, Lorsban, Asana
30	25.69	4.72	Balan, Vernam, Basagran	Bravo, Terraclor	Temik, Lannate, Orthene
40	23.27	4.00	Balan, Dual, Basagran, Gramoxone, Poast	Bravo + sulfur	Orthene, Asana
50	28.00	0.00	Balan, Vernam, Dual, Basagran, Starfire, Pursuit	Bravo	Orthene, Disyston, Asana
60	12.82	10.25	Pursuit, Treflan, Poast, Basagran, Dual	Bravo, Terraclor	Lorsban
70	19.01	9.75	Treflan, Dual	Bravo	
80	25.80	12.00	Dual, Prowl, Pursuit, Poast, Butyrac	Bravo, Rovral, Dithane, Topsin	Orthene, Lorsban
90	18.64	3.22	Sonalan, Pursuit, Starfire, 2,4-DB	Bravo	Temik, Lorsban, Lannate

* Rainfall is maximum amount during growing season for locations with multiple digging dates. Early digging dates generally have less rainfall and irrigation.

Table 6. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Suffolk, VA, (code 10), in 1992 (nonirrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	2,505 c [†]	7.3	75.5	2.8	0.0	78.3	8.0	54.2
NC 7	3,086 ab	85.3	72.3	1.5	0.3	74.1	46.8	90.3
F 1011	3,031 ab	4.8	76.3	2.8	0.0	79.1	10.8	56.2
UF 79308-3	2,659 bc	5.8	72.3	3.8	0.0	76.1	7.5	54.0
UF 85112	2,904 bc	5.3	74.1	2.5	0.5	77.1	5.8	61.6
GA T-2741	2,795 bc	1.3	70.5	4.0	0.0	74.5	0.3	39.7
GA T-2842	2,795 bc	2.0	74.0	3.0	0.0	77.0	7.3	48.9
VA 910212	3,349 a	78.3	69.3	3.0	0.0	72.3	32.3	82.1

* Contributing author T.A. Coffelt reported that entries were planted later than normal and stands were good. Sclerotinia blight was present throughout the test. Cooler-than-normal temperatures, coupled with disease pressure, contributed to a normal digging date.

† Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 7. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Lewlston, NC, (code 20), in 1992 (nonirrigated)

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	4,144 a-d*	4.6	75.1	2.7	— †	77.8	7.8	52.8
NC 7	4,492 ab	69.7	76.3	1.7	—	78.0	45.9	81.8
F 1011	4,258 a-c	3.0	75.9	2.2	—	78.1	6.4	51.5
UF 79308-3	3,622 cd	6.6	73.2	3.1	—	76.3	7.1	54.0
UF 835112	3,925 b-d	9.1	74.0	2.8	—	76.8	5.9	58.0
GA T-2741	3,880 b-d	7.7	72.1	2.2	—	74.3	5.8	44.5
GA T-2842	4,780 a	4.0	75.2	2.7	—	77.9	6.0	48.5
VA 910212	3,403 d	62.3	72.4	2.1	—	74.5	32.0	78.3

* Values within same column followed by same letter are not significantly different at the 5% probability level.

† Data not reported

Table 8. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Tifton, GA, (code 30), in 1992 (irrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florigiant	3,630 e-h [†]	75.5	70.7	2.6	1.5	74.8	30.6	88.2
Florunner	3,463 g-i	3.8	76.0	5.5	1.4	82.9	12.3	57.1
NC 7	4,074 b-e	83.7	72.1	2.1	2.6	76.8	55.1	105.5
F 1011	3,411 g-i	3.1	74.1	6.6	1.7	82.4	13.1	57.5
UF 79308-3	3,285 hi	7.1	72.3	5.4	1.4	79.1	16.2	59.3
UF 85112	4,433 bc	13.4	70.0	4.9	2.9	77.8	18.3	68.6
GA T-2741	5,230 a	0.0	78.1	4.4	0.4	82.9	2.0	41.0
GA T-2842	4,203 b-d	1.5	72.3	6.0	1.0	79.3	11.0	49.4
VA 910212	3,839 d-g	65.1	69.1	3.2	2.2	74.5	37.4	84.0
<u>Local checks</u>								
GA T-2843	4,397 bc	3.6	69.9	4.0	4.3	78.2	21.5	54.4
GA T-2844	4,306 b-d	9.6	69.4	6.0	2.5	77.6	22.3	54.2
GA T-2845	4,540 b	10.8	71.9	6.0	2.2	80.1	23.6	58.6
GA T-2846	4,005 c-f	0.5	78.5	3.9	0.7	83.1	9.8	53.2
GA T-2847	4,489 bc	1.4	80.5	3.1	0.8	84.4	20.4	53.6
GA T-2736	3,547 f-h	0.0	71.1	8.1	0.5	79.7	3.5	38.0
GA T-2742	3,439 g-i	2.2	73.9	5.4	1.2	80.5	9.6	52.0
Southern Runner	4,031 c-f	0.0	77.9	2.6	0.8	81.3	22.2	53.6
WR-100	4,015 c-f	53.5	76.8	1.8	1.8	80.4	45.7	76.8
Marc I	3,053 i	2.2	63.9	10.8	3.4	78.1	6.3	49.1

* Contributing author W.D. Branch stated that very good stands were obtained by irrigating early in the season. Canopy growth and development were excellent during the growing season. Differential harvest dates were as follows: Aug. 31 = Marc I and UF 79308-3; Sept. 9 = NC 7, UF 85112, VA 910212, GA T-2742, GA T-2844, and GA T-2842; Sept. 21 = Florunner, Florigiant, F 1011, GA T-2845, and GA T-2846; and Oct. 6 = Southern Runner, WR-100, GA T-2736, GA T-2741, GA T-2843, and GA T-2847. White mold was the most noticeable disease problem in this test, but yield and grade were not affected as much as in the Spanish-Valencia test. Tomato spotted wilt virus (TSWV) was also observed on an occasional plant throughout the test.

[†] Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 9. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Gainesville, FL, (code 40), in 1992 (nonIrrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	2,968 de†	9.7	73.0	4.5	3.0	80.5	17.9	58.7
NC 7	3,648 a-c	97.1	75.6	0.9	2.2	78.6	66.6	113.3
F 1011	2,968 de	7.0	74.6	3.7	2.5	80.8	21.8	60.2
UF 79308-3	2,187 f	21.4	72.2	3.8	3.5	79.6	25.4	65.4
UF 85112	3,766 ab	21.8	72.0	4.1	2.1	78.3	31.9	72.2
GA T-2741	4,011 a	0.0	71.6	5.3	0.2	78.5	5.9	42.7
GA T-2842	3,485 bc	8.4	66.1	4.7	3.3	74.2	20.0	53.3
VA 910212	2,586 ef	86.7	69.8	1.0	4.9	75.7	44.6	87.8
<u>Local checks</u>								
Marc I	3,276 cd	3.0	70.4	5.9	3.5	79.8	21.2	58.3
UF 86107	3,603 a-c	24.9	72.8	2.9	3.4	79.1	33.2	68.7
F 1025	3,812 ab	94.7	74.1	1.6	0.9	76.6	55.3	102.9
UF 91108	3,739 a-c	10.9	76.4	4.3	0.6	81.4	38.3	65.7
UF 81206-2	3,494 bc	40.9	70.2	3.0	0.3	73.5	40.9	71.6
F 1028	3,585 a-c	11.7	76.8	2.4	1.8	80.9	21.6	60.3

* Contributing author D.A. Knauff observed that yields were lower than expected because of heavy white mold pressure. In addition, almost 7 inches of rain occurred after digging and before harvest. Stands for UF 79308-3 were below optimal, resulting in abnormally low yields.

† Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 10. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Marlanna, FL, (code 50), in 1992 (nonirrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	4,733 cd [†]	2.4	81.7	0.7	0.0	82.4	14.3	60.9
NC 7	4,914 bc	92.6	78.5	0.0	0.0	78.5	61.3	111.7
F 1011	4,833 b-d	2.6	81.8	0.9	0.0	82.7	14.5	59.4
UF79308-3	4,855 b-d	5.1	80.3	0.7	0.0	81.0	14.6	63.9
UF 85112	4,837 b-d	3.4	76.5	1.6	0.0	78.1	11.1	65.0
GA T-2741	5,259 ab	0.0	79.1	1.8	0.0	80.8	1.1	43.0
GA T-2842	4,715 cd	1.9	77.7	2.2	0.0	79.8	9.7	50.9
VA 910212	4,116 e	68.8	76.3	0.2	0.0	76.4	37.0	84.1
<u>Local checks</u>								
Marc I	5,100 a-c	1.0	78.8	1.6	0.0	80.3	6.3	58.1
UF 86107	4,687 cd	3.4	77.6	1.6	0.0	79.1	8.9	63.7
F 1025	4,424 de	88.9	77.4	0.1	0.0	77.5	46.5	105.6
UF 91108	5,409 a	2.7	83.2	0.1	0.0	83.3	33.7	72.2
UF 81206-2	5,229 ab	20.6	77.3	0.2	0.0	77.4	38.3	78.9
F 1028	4,651 cd	5.4	80.5	0.6	0.0	81.2	12.2	61.8

* Contributing author D.W. Gorbet reported that a dry May delayed planting, but rainfall was favorable during the growing season. Diseases present included early and late leafspot, white mold, rhizoctonia limb rot, TSWV, and stripe virus. White mold and TSWV probably reduced yields in some plots, especially Florunner. There were three digging dates, as different entries reached maturity (entries Marc I, UF 85112, UF 86107, UF 79308-3, VA 910212, and GA T-2842 were dug at 130 days; entries UF 81206-2 and UF 91108 were dug at 151 days; and all other entries were dug at 137 days). The delayed planting probably limited yields.

[†] Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 11. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Headland, AL, (code 90), in 1992 (Irrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	3,585 d [†]	— [‡]	69.0	6.0	—	75.0	—	—
NC 7	3,557 d	—	69.0	4.0	—	73.0	—	—
F 1011	3,739 cd	—	71.0	5.0	—	76.0	—	—
UF 79308-3	4,011 bc	—	66.0	10.0	—	76.0	—	—
UF 85112	4,701 a	—	64.0	10.0	—	74.0	—	—
GA T-2741	4,410 ab	—	67.0	8.0	—	75.0	—	—
GA T-2842	4,029 bc	—	65.0	9.0	—	74.0	—	—
VA 910212	4,538 a	—	68.0	4.0	—	72.0	—	—

* Contributing author J.P. Bostick reported that entries UF 85112, UF 79308-3, VA 910212, and GA T-2842 were dug Sept. 4. Entries NC 7, Florunner, and UF 1011 were dug Sept. 15. Entry GA T-2741 was dug Sept. 22.

[†] Values within same column followed by same letter are not significantly different at the 5% probability level.

[‡] Data not reported

Table 12. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at College Station, TX, (code 60), in 1992 (Irrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	3,368 b-e [†]	— [‡]	71.5	4.3	0.1	75.9	—	52.7
NC 7	3,077 de	—	68.6	2.4	3.0	74.0	47.0	96.2
F 1011	3,363 b-e	—	72.6	4.2	0.5	77.3	—	52.5
UF 79308-3	3,403 a-e	—	73.2	4.0	0.5	77.7	—	59.1
UF 85112	3,474 a-c	—	71.4	3.3	0.2	74.9	—	65.1
GA T-2741	3,324 b-e	—	71.4	3.6	0.6	75.6	—	50.3
GA T-2842	3,338 b-e	—	72.1	5.0	0.0	77.1	—	40.1
VA 910212	3,122 c-e	—	61.5	3.9	1.8	67.3	32.4	1.3
<u>Local checks</u>								
Tamrun 88	3,254 b-e	—	71.7	5.3	0.5	77.5	—	51.5
GK-7	3,308 b-e	—	71.0	4.0	0.8	75.8	—	55.7
AT-127	3,076 de	—	72.3	3.3	0.2	75.8	—	61.9
Marc I	3,759 a	—	71.9	3.9	1.0	76.9	—	57.4
TX 874337	3,299 b-e	—	72.1	2.3	1.1	75.5	—	90.4
TX 896100	3,429 a-d	—	71.4	3.9	0.1	75.4	—	57.7
GA Runner	3,041 e	—	70.4	5.2	0.3	75.9	—	50.1
AgraTech VC-1	3,598 ab	—	68.9	2.2	0.6	71.7	—	76.5
OK 89834	3,142 c-e	—	71.7	4.5	0.3	76.5	—	51.6
Southern Runner	3,059 de	—	69.0	4.6	0.1	73.8	—	55.4

* Contributing author O.D. Smith stated that some pod discoloration was observed at digging as a result of stem rot. Emergence was good, but rain about 1 week later resulted in excess moisture during seedling growth. This resulted in reduced vine growth.

[†] Values within same column followed by same letter are not significantly different at the 5% probability level.

[‡] Data not reported

Table 13. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Stephenville, TX, (code 70), in 1992 (Irrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	4,691 c-e [†]	— [‡]	76.0	2.0	0.5	78.5	—	62.9
NC	3,713 j	—	75.9	0.7	0.2	76.8	—	107.1
F 1011	5,118 a	—	77.3	0.8	1.1	79.1	—	64.4
F 79308-3	4,300 e-h	—	75.2	2.1	1.2	78.4	—	62.2
UF 85112	4,024 g-j	—	72.6	2.4	0.8	75.7	—	69.5
GA T-2741	3,946 h-j	—	74.5	2.7	0.1	77.3	—	41.4
GA T-2842	4,754 a-d	—	74.3	2.0	0.5	76.8	—	54.9
VA 910212	4,505 c-f	—	67.9	0.9	0.9	69.8	—	80.7
<u>Local checks</u>								
Tamrun 88	4,708 b-d	—	77.3	1.0	1.3	79.6	—	59.2
GK-7	5,029 ab	—	75.7	1.4	0.7	77.8	—	66.1
AT-127	4,113 f-i	—	76.7	1.2	0.2	78.1	—	73.8
Marc I	4,390 d-g	—	75.3	1.8	0.5	77.5	—	61.2
GA Runner	4,299 e-h	—	75.9	1.3	0.9	78.1	—	64.4
AgraTech VC-1	4,375 d-g	—	69.2	1.8	1.2	72.2	—	79.3
Southern Runner	3,725 ij	—	72.7	3.7	0.5	76.9	—	52.8
Okrun	4,859 a-c	—	76.6	1.2	0.6	78.4	—	64.8

* Contributing author C.E. Simpson observed that the cool, wet growing season retarded maturity. Peanuts were not fully mature when freezing temperatures ended the growing season and made harvest necessary. No severe outbreaks of disease occurred.

[†] Values within same column followed by same letter are not significantly different at the 5% probability level.

[‡] Data not reported

Table 14. Yield and grade characteristics of Virginia-Runner-type peanut lines grown at Fort Cobb, OK, (code 80), in 1992 (irrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Florunner	4,243 de [†]	— [‡]	63.2	4.8	3.2	71.2	—	58.2
NC 7	4,160 de	—	65.3	1.0	2.0	68.3	—	99.2
F 1011	4,288 c-e	—	63.0	4.7	5.3	73.0	—	60.2
UF 79308-3	4,189 de	—	59.0	5.7	5.0	69.7	—	62.5
U 85112	4,591 a-c	—	64.2	3.7	3.2	71.0	—	66.1
GA T-2741	4,114 e	—	68.3	3.5	2.0	73.8	—	48.5
GA T-2842	3,963 e	—	60.3	6.2	3.7	70.2	—	55.7
VA 910212	4,053 e	—	59.7	1.2	3.8	64.7	—	88.9
Local Checks								
Tamrun 88	4,106 e	—	63.2	5.7	2.8	71.7	—	56.8
AT-127	4,076 e	—	62.8	4.5	3.2	70.5	—	62.7
Marc I	4,477 b-d	—	64.7	4.2	2.3	71.2	—	57.7
Okrun	4,855 a	—	65.8	4.5	4.8	75.2	—	59.9
OK-KCU 1	4,598 a-c	—	54.7	7.7	2.0	64.3	—	50.0
OK-CF 121	3,539 f	—	70.7	3.5	0.8	75.0	—	48.7
OK-CF 126	4,681 ab	—	70.7	1.0	2.2	73.8	—	56.5

* Contributing author J.S. Kirby reported excellent plant stands but a cool wet season. Only 3 irrigations were needed and none before Aug. 13. Rainfall was 12.63 inches above the long-term average (27.06 inches), with 25.81 inches received from planting to harvest. September and October were dry, resulting in an excellent harvest season.

[†] Values within same column followed by same letter are not significantly different at the 5% probability level.

[‡] Data not reported

Table 15. Yield and grade characteristics of Spanish-Valencia-type peanut lines grown at Tifton, GA, (code 30), In 1992 (Irrigated)*

Entry	Yield (lb/acre)	% Fancy	% TSMK	% OK	% DK	% Meat	% Elk	g/100 Seed
Toalson	2,334 a†	0.0	64.4	7.0	1.2	72.6	0.2	39.8
Starr	2,015 b	0.0	62.7	13.0	2.1	77.8	0.1	33.9
Tamnut 74	2,012 b	0.0	67.1	9.2	1.6	77.9	0.0	33.8
Spanco	1,910 b	0.0	64.8	9.6	3.4	77.8	1.2	41.0
Tamspan 90	1,904 b	0.0	66.4	8.2	2.7	77.3	1.4	39.2
Pronto	1,612 c	0.0	65.0	11.0	1.6	77.6	0.3	41.8
Georgia Red	1,168 d	28.6	50.3	10.9	9.5	70.4	4.9	48.2
Val. McRan	959 de	3.8	48.6	17.0	4.0	69.6	0.5	37.9
N.M. Val. A	917 e	5.9	49.4	14.7	5.6	69.5	0.2	40.5
N.M. Val. C	838 e	5.6	51.0	14.5	5.0	70.5	0.4	40.4

* Contributing author W.D. Branch stated that white mold was the major disease problem. Valencia entries were dug early because of disease pressure. Again, only an occasional TSWV-infected plant was observed at the end of the plots. In contrast to last year, early season irrigation was needed, especially in May. Excellent growth and development were noted throughout the test. Individual entries were dug on the following harvest dates: Aug. 13 = N.M. Val. A, N.M. Val. C, and Val. McRan; Aug. 20 = Starr, Tamnut 74, Pronto, Tamspan 90, Spanco, and Georgia Red; Aug. 28 = Toalson. Planting date was Apr. 16. Seeding rate, plot size, soil type, soil analyses, mineral amendments, and pesticides were essentially the same as in the Virginia-Runner test.

† Values within same column followed by same letter are not significantly different at the 5% probability level.

Table 16. Fatty acid composition of UPPT entries grown at Gainesville, FL, in 1992*

Entry	Fatty acid composition (% of total) †							
	16:0	18:0	18:1	18:2	20:0	20:1	22:0	24:0
Marc I	8.00	2.98	65.20	17.13	1.44	1.23	2.55	1.46
UF 85112	8.76	2.77	60.77	21.62	1.31	1.11	2.33	1.33
F 1028	9.01	2.36	57.07	24.62	1.26	1.34	2.82	1.52
UF 86107	8.51	2.79	60.24	22.09	1.33	1.16	2.46	1.43
F 1025	10.94	3.06	48.58	31.63	1.34	0.84	2.41	1.22
UF 79308-3	8.95	2.53	62.32	19.59	1.25	1.30	2.56	1.50
Florunner	9.48	2.36	57.26	24.22	1.22	1.26	2.61	1.56
UF 91108	7.41	3.49	69.05	12.45	1.67	1.26	3.18	1.49
NC 7	7.16	4.36	68.78	13.19	1.80	1.04	2.52	1.16
UF 81206-2	6.30	6.83	66.78	11.79	2.59	0.85	3.58	1.29
F 1011	9.55	2.33	56.69	24.73	1.22	1.24	2.66	1.58
GA T-2741	8.30	3.04	61.37	20.02	1.55	1.20	3.02	1.51
GA T-2842	9.51	2.68	57.29	23.83	1.33	1.18	2.67	1.52
VA 910212	8.27	3.47	65.43	16.67	1.46	1.10	2.28	1.32

* Courtesy of cooperator D.A. Knauft

† Fatty acids for the 8 columns are palmitic, stearic, oleic, linoleic, arachidic, eicosanoic, behenic, and lignoceric, respectively.

Table 17. Iodine value, O/L ratio, percent total saturated fatty acids, P/S ratio, and percent total long-chain saturated fatty acids of UPPT entries grown at Gainesville, FL, in 1992*

Entry	Iodine value	O/L[†] Ratio	% Total saturated	P/S[‡] Ratio	% Total long chain
Marc I	86.72	3.81	16.43	1.04	5.45
UF 85112	90.59	2.81	16.50	1.31	4.97
F 1028	92.78	2.32	16.97	1.45	5.60
UF 86107	90.99	2.73	16.52	1.34	5.22
F 1025	97.23	1.54	18.97	1.67	4.97
UF 79308-3	88.55	3.18	16.79	1.17	5.31
Florunner	92.19	2.36	17.23	1.41	5.39
UF 91108	81.94	5.55	17.24	0.72	6.34
NC 7	82.82	5.21	17.00	0.78	5.48
UF 81206-2	78.53	5.66	20.59	0.57	7.46
F 1011	92.57	2.29	17.34	1.43	5.46
GA T-2741	88.40	3.07	17.42	1.15	6.08
GA T-2842	91.48	2.40	17.71	1.35	5.52
VA 910212	86.01	3.93	16.80	0.99	5.06

* Courtesy of cooperator D.A. Knauft

[†] O/L ratio is oleic/linoleic.

[‡] P/S ratio is polyunsaturated/saturated fatty acids.

Table 18. Mean yields (lb/acre) of entries by production area and by locations with common entries

Entry	VC*	SE†	SW‡	9 LOC§
Florunner	3,325	3,687	4,101	3,744
NC 7	3,789	4,048	3,650	3,858
F 1011	3,645	3,738	4,256	3,890
UF79308-3	3,141	3,585	3,964	3,612
UF 85112	3,415	4,434	4,030	4,073
GA T-2741	3,338	4,728	3,795	4,108
GA T-2842	3,788	4,108	4,018	4,007
VA 910212	3,376	3,770	3,893	3,723

* VC = Suffolk, VA; and Lewiston, NC.

† SE = Tifton, GA; Gainesville, FL; Marianna, FL; and Headland, AL.

‡ SW = College Station, TX; Stephenville, TX; and Fort Cobb, OK.

§ 9 LOC = Suffolk, VA; Lewiston, NC; Tifton, GA; Gainesville and Marianna, FL; Headland, AL; College Station and Stephenville, TX; and Fort Cobb, OK.